

WHAT IS CLAIMED IS:

1. A biologically pure culture of a *Streptomyces* strain deposited at the American Type Culture Collection (ATCC) Accession number BAA-668, or a variant thereof.
- 5 2. Composition comprising an inoculum of a strain as recited in claim 1 and a carrier.
3. Composition as recited in claim 2, wherein the carrier comprises chitosan.
- 10 4. A method of biocontrolling common scab comprising applying on a plant an effective amount of an inoculum of a geldanamycin-producing strain able to survive in the plant rhizosphere.
5. The method as recited in claim 4, wherein said strain encodes a protein having the sequence of SEQ ID NO: 6 or an homologous sequence having geldanamycin activity.
- 15 6. The method as recited in claim 4, wherein said strain comprises the nucleotide sequence of SEQ ID NO: 7 or an homologous sequence having geldanamycin activity.
7. A method as recited in claim 4, wherein said strain comprises a nucleotide sequence able to hybridize under high stringency
20 conditions to the complementary sequence of a sequence selected from the group consisting of:
 - a) the nucleotide sequence of SEQ ID NO: 1;
 - b) the nucleotide sequence of SEQ ID NO: 2;
 - c) the nucleotide sequence of SEQ ID NO: 3;

d) the nucleotide sequence of SEQ ID NO: 5; and

e) the nucleotide sequence of SEQ ID NO: 7.

8. A method as recited in claim 4, wherein said strain comprises a nucleotide sequence able to hybridize under high stringency conditions to the complementary sequence of the nucleotide sequence of SEQ ID NO: 1.

9. A method as recited in claim 4, wherein said strain comprises a nucleotide sequence able to hybridize under high stringency conditions to the complementary sequence of the nucleotide sequence of SEQ ID NO: 2.

10. A method as recited in claim 4, wherein said strain comprises a nucleotide sequence able to hybridize under high stringency conditions to the complementary sequence of the nucleotide sequence of SEQ ID NO: 3.

11. A method as recited in claim 4, wherein said strain comprises a nucleotide sequence able to hybridize under high stringency conditions to the complementary sequence of the nucleotide sequence of SEQ ID NO: 5.

12. A method as recited in claim 4, wherein said strain comprises a nucleotide sequence able to hybridize under high stringency conditions to the complementary sequence of the nucleotide sequence of SEQ ID NO: 7.

13. A method as recited in claim 4, wherein said strain is a *Streptomyces* strain.

14. A method as recited in claim 4, wherein said strain is selected from the group consisting of *Streptomyces violaceusniger*, *Streptomyces hygroscopicus* and *Streptomyces melanosporafasciens* strains.

5 15. A method as recited in claim 4, wherein said strain is deposited at the *American Type Culture Collection* (ATCC) under Accession number BAA-668.

16. A method as recited in any one of claims 4, wherein said biocontrolling comprises reducing the severity of common scab.

10 17. A method as recited in any one of claims 4, wherein said biocontrolling comprises reducing the incidence of common scab.

18. A method for modifying the biocontrol efficiency of a bacterial strain comprising intraspecific protoplasm fusion of the bacterial strain with an other strain having a desirable biocontrol property against common scab.

15 19. A method for making a biocontrol agent against common scab, which comprises the steps of:

obtaining a microbial strain susceptible of producing geldanamycin;

20 contacting the nucleic acids or the proteins of said strain with a ligand specific to geldanamycin or to a nucleic acid encoding geldanamycin;

detecting the formation of a complex as an indication of the presence of geldanamycin or of a nucleic acid encoding geldanamycin in said strain,

25 whereby said strain or a geldanamycin-producing part of said strain may be used as a biocontrol agent against common scab.

20. The method as recited in claim 19, wherein said ligand is a nucleic acid having at least 12 nucleotides in length hybridizing with the nucleic acids having a sequence complementary to a sequence selected from:

- a) the nucleotide sequence of SEQ ID NO: 1;
- 5 b) the nucleotide sequence of SEQ ID NO: 2;
- c) the nucleotide sequence of SEQ ID NO: 3;
- d) the nucleotide sequence of SEQ ID NO: 5; and
- e) the nucleotide sequence of SEQ ID NO: 7.